

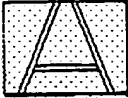
21 Claims, 9 Drawing Sheets

FIG. 1 is a block diagram of a video camera system. The system includes an Image Pickup System (1) with sub-components 1a and 1b. The video signal path consists of: Image Pickup System (1) → A/D converter (3) → Camera Signal Processing Circuit (11) (4) → Enlargement Processing Circuit (5) → Camera Signal Processing Circuit (12) (6) → D/A converter (7) → Video Signal Output. The control path includes: Driver (5) → Focus Motor (16) → IR Meter (18) → Gate Circuit (20) → Exposure Control Circuit (19) → AF Signal Processing Circuit (21) → Microcomputer (9). The Microcomputer (9) also controls the Enlargement Execution Switch (8), Enlargement Position Input Device (10), and Enlargement Magnification Setting Device (13). The Microcomputer (9) is connected to the Enlargement Processing Circuit (5) via a control line (9).

Abstract Text - ABTX (1):

An image pickup device is capable of picking up images while electrically enlarging the same. In enlarging image pickup, horizontal transfer pulses H.sub.1, H.sub.2, a reset pulse R, a clock signal CLK, sampling pulses SP.sub.1, SP.sub.2 and so on having the periods twice as long as those in the normal image pickup are generated from a horizontal transferring circuit in a timing pulse generating circuit. Thereby, charges stored in a CCD image sensor (6) are horizontally transferred by these signals. A vertical transfer circuit sets vertical transfer pulses V.sub.1 to V.sub.4 at arbitrary timings during 1H of a video period to output the same once in every 2H and outputs high speed vertical transfer pulses in two periods in a vertical blanking period and outputs a reading pulse TG between the first high speed vertical transfer period and the next high speed vertical transfer period. The charges stored in the CCD image sensor are then transferred in the vertical direction in response to these signals. Consequently, a selected area of the screen of the normal image pickup can be enlarged and picked up.

Sheet 14 of 185,019,912

FIG. 22B

Brief Summary Text - BSTX (32)

	U	Document	Issue	D
11	<input type="checkbox"/>	US 4910599	199003	Imaging high and
		A	20	
12	<input type="checkbox"/>	US 4876601	198910	Imaging variation
		A	24	
13	<input type="checkbox"/>	US 5019912	199105	Imaging enlarged
		A	28	
14	<input type="checkbox"/>	US 5023719	199106	Imaging real time
		A	11	


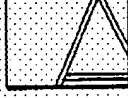
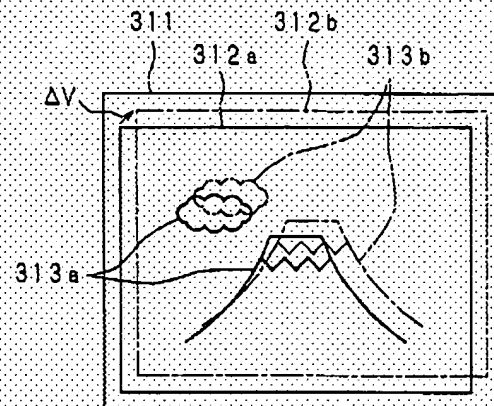
FIG. 22C

FIG. 22D



	U	Document	Issue D	
18	U	US 5905530	199905	Image p
	U	A	18	
19	U	US 5835641	199811	Image p
	U	A	10	registre
20	U	US	200204	IMAGE P
	U	2002004420	18	ELECTR
	U	6 A1		ZOOMIN
21	U	US 6445416	200209	Image p
	U	B1	03	function

Claims Text - CLTX (2):

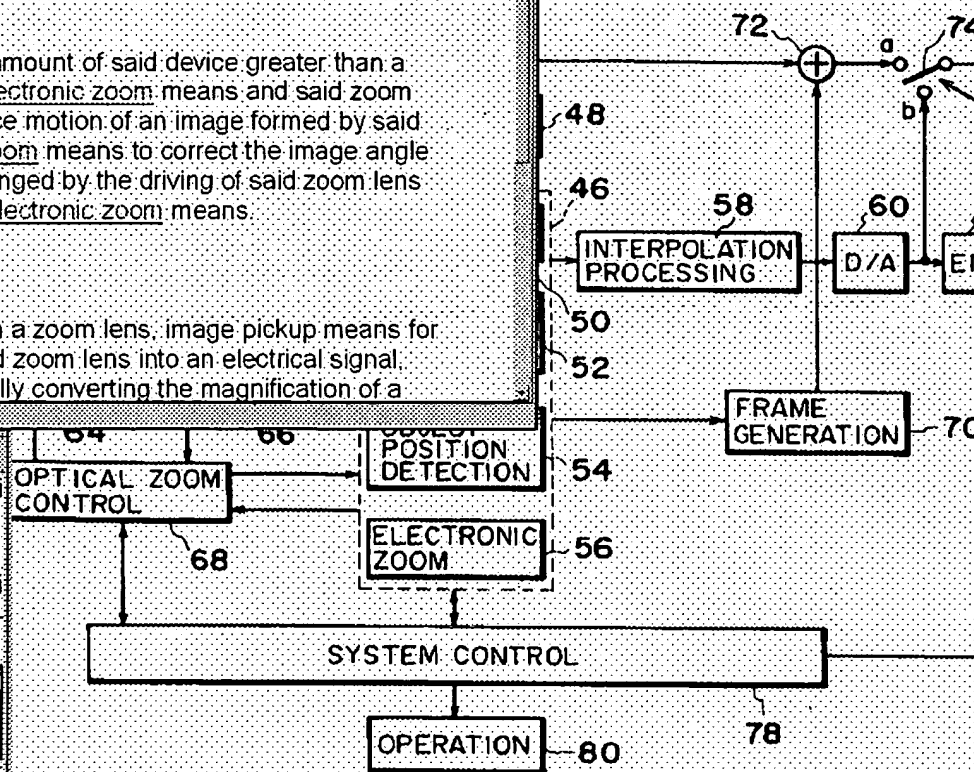
electronic zoom means for performing an electronic zoom operation on a designated portion of a picked-up image with changeable magnification.

Claims Text - CLTX (4):

control means operative upon vibration amount of said device greater than a predetermined value for controlling said electronic zoom means and said zoom lens to drive said zoom lens so as to reduce motion of an image formed by said zoom lens and to control said electronic zoom means to correct the image angle of the designated portion of the image changed by the driving of said zoom lens by the electronic zoom operation by said electronic zoom means.

Claims Text - CLTX (11):

6. An image pickup device provided with a zoom lens, image pickup means for converting an optical image formed by said zoom lens into an electrical signal, and electronic zoom means for electronically converting the magnification of a



U	Document	Issue D
21	US 6445416 B1	200209 03
22	JP 07283990 A	200211 05
23	US 6172707 B1	200101 09
24	JP 07283988 A	199510 27